

FIELD NOTES ON THE ANTELOPES OF NYASSALAND.

By PERCY RENDALL, M.D., F.Z.S.*

1. **The Common Waterbuck.** *Cobus ellipsiprymnus* (Ogilby). (*B. A. II.* p. 97.)

Although these animals are always found in the neighbourhood of some permanent water supply, they often frequent open and hilly ground. On the banks of the Upper Shiré River I found them in company with both Pallah and Lichtenstein's Hartebeest. Numerous instances of their vitality could be quoted, and their senses are very acute—I never managed to surprise one in a stalk. For their size no animal has so large an ear, and it is specially obvious in the cows of this species. They are very prone to take the same route to and fro to their feeding grounds, and often may be seen when it is too dark to see the rifle-sights, if you know their haunts, ghost-like in the gloom. *Females* I have seen in large numbers, as many as twenty in a herd, and it is a fine sight to see them retreat with high-stepping trot, ears cocked forward, and head high, with arched neck.

Their droppings are most characteristic—large flat, coherent, rounded masses—and it is by these that their presence can always be detected with certainty. Even though meat was scarce, I could never bring myself to eat this animal, but the natives have not the same prejudice, and anything in the way of "*nyama*" (meat) is always relished.

These antelopes are still common on the banks of the Zambezi where there are no villages, and Captain J. Nicholas, of H.M.S. *Mosquito*, found them within a few hours' steam of the coast near Chindi.

2. **Crawshay's Waterbuck.** *Cobus crawshayi* Sel. (*B. A. II.* p. 109.)

This new species has been so exhaustively dealt with in that splendid publication *The Book of Antelopes* that I have nothing to add, since my only information is derived from Mr. Crawshay's personal narrative. I think, however, I am right in saying that the smaller size, and absence of the white blaze on the rump, are the chief points of divergence from the foregoing species.

3. **The Pookoo.** *Cobus vardoni* Livingst. (*B. A. II.* p. 141.)

I do not think this antelope came as far south as the districts in which I shot, but Mr. Poulett Weatherley found them in great numbers on the Nyassa-Tanganyika Plateau right across to Lake Mweru. His letter to me which conveyed this information was written from Chipemba.

The only pair of horns which I saw was one in the African Lakes Company's store at Karonga, at the north-west end of Lake Nyassa.

4. **The Lechwé.** *Cobus leché* (Gray). (*B. A. I.* p. 149.)

This animal was found by Mr. P. Weatherley to exist, in small numbers, in the swamps between Lakes Mweru and Bangweolo.

* To this interesting account of Dr. Rendall I have added the modern specific names of the species dealt with, the name of the author, references to the *Book of Antelopes* (*B. A.*), and a few footnotes.—WALTER ROTHSCHILD.

5 The Reedbuck. *Cervicapra arundinum* (Bodd.). (*B. A. H.* p. 157.)

I did not find this antelope so wary as Mr. R. Crawshaw relates (*P. Z. S.* 1890, p. 653), though in other particulars his remarks correspond with my personal observations.

Wherever I shot in Nyassaland I met with them, and Captain Nicholas, of H.M.S. *Mosquito*, found them on the banks of the Zambezi, forty miles from the sea, in larger numbers than any other game. They are common right across the Tuchila Plain to the shores of Lake Shirwa.

On the Chimolera Plain, at the foot of the Melanji Range, I shot a fine buck which bore the deep marks of a leopard's claws on the right side of its neck; these wounds had been very recently inflicted, as they were still open, when my bullet ended its career. The best measurements of a *male* that I obtained in this species, between two spears, were :—

From nose to tail	64 inches.
Height at shoulder	37 „

Mr. G. Hoare shot at Mpimbi, on the Upper Shiré River, what I believe is the largest pair of horns that exist, *i.e.*:—

Length along curve	16 $\frac{3}{4}$ inches.	} Measured when horns were dry.
Circumference at base	6 $\frac{3}{4}$ „	
Tip to tip of horns	19 $\frac{1}{2}$ „	

At the base of every Reedbuck's horn there is a spongy pad that is covered by a black leathery continuation of the epidermal covering of the bony core; this shrinks very much after death, but can be preserved if carefully separated from the skin (into which it is merged) with a knife. Such a horn as the one quoted above would gain 1 $\frac{1}{2}$ inches in circumference if I had had the opportunity to measure it when it was shot. I have only shot two Reedbucks with horns more than 14 inches in length, and they were particularly fine specimens; 12 inches is considered large for general shooting.

There is a large inguinal pouch in this antelope with a long slit-like orifice that lies in the crease that the hindleg forms with the abdomen; it is big enough to contain a child's hand. Its flesh is extremely good eating, one of the best that the sportsman can procure.

One young Reedbuck I tried to rear, but it died after a while from some occult cause. A doe that I dissected contained a half-grown fetus on October 7th, 1895. A small calf that I got only a few days old weighed 7 lbs.

6. The Klippspringer. *Oreotragus oreotragus* (Goldf.). (*B. A. H.* p. 5.)

It was on the rocky spurs of the Maiuni Hills, which form the backbone of the Livingstonia Peninsula, that divides the S.W. from the S.E. arm of Lake Nyassa, that I saw most of the Klippspringer, always in pairs, and in the roughest possible places, perched on the top of a large boulder or upon the sloping face of a huge slab of rock, off the face of which at your shot it will fling itself like an indiarubber ball, to disappear amongst the jumble of rocks, with an unerring certainty of foot, in a manner that is little short of marvellous to the onlooker. Several times, however, I surprised this little African chamois feeding in comparatively open ground at the base of some rock-strewn kopjes. This gives you a chance, for they will race uphill,

hop on to the top of the first boulder they meet, and then turn half round and have a look at you. A wounded buck I have known to utter a hoarse bleating cry. The large black prominent tear-gland on the face has a central depressed orifice which is always filled with mucus. In those I have shot the whole of the upper surface of the body, anterior to the hindquarters, is of a markedly golden yellow tint. The best measurement I obtained was :—

Nose to tail	33 inches.
Height at shoulder	18½ "

For a short time I had a young Klippspringer alive, and it took milk freely, but after ten days or so had elapsed it caught cold and died of chest complaint. It had a tiny bleating cry.

7. Livingstone's Antelope. *Nesotragus livingstonianus* Kirk. (*B. A. II.* p. 55.)

Near Lesumbwi, on Lake Nyassa, when I was after small birds with only a shot gun, I kicked up out of its form what I feel confident was this little antelope, from its size and colour: but either my aim was bad, or the shot too small to stop it. Though Chupanga (where Mrs. Livingstone was buried), on the Zambezi, is the locality where the type-specimen of this small buck was got, I never saw horns of this antelope in Nyassaland. Curiously enough I got a good series as I passed through Delagoa Bay, for the natives bring this species entire to Lorenzo Marques to sell the meat, from the south end of the bay near the river Iembe, so they are evidently common there.

Subsequently I saw, in the neighbourhood of Lesumbwi, several collections of droppings that I feel sure belonged to this species, but I never got a sight of it again.

I have seen horns 4 inches in length from the Province of Moçambique.

8. The Steinbuck. *Nanotragus tragulus*.

This is only mentioned by Mr. Crawshay on the strength of one doe, which he thought might have belonged to this species: but as I have never seen this animal I think the specimen may have belonged to the following, with which it presents some superficial points of resemblance, viz. :—

9. Peters' Oribi. *Ourebia hastata* (Pet.). (*B. A. II.* p. 21.)*

I believe this is the name that is to be assigned to an animal that I got a good series of in Nyassaland.

The following description I take from my note-book :—General colour light cinnamon-yellow, which abruptly merges into white on the flanks: this abrupt line fades towards the chest. The belly is pure white. The hair is everywhere thick and long, almost woolly on the abdomen. **There are wavy transverse lines on the back, faint and inconspicuous in some lights.** The skin in the inguinal region is almost devoid of hair, and on each side of the testicles and teats respectively are two glands from which hang matted tufts of pure white hair 2 to 3 inches in length. Its

* The transverse lines mentioned by Dr. Rendall are very conspicuous in the specimens brought home by him, though I cannot detect any other tangible differences from *O. hastata*. I believe this will ultimately turn out to be a different species.—WALTER ROTHSCILD.

forehead is concave. It has a bare patch at the root of the ear, circular in form, and on an inferior plane. There is an isolated white patch on the throat and a white ill-defined stripe above the eye. Over the tear-gland there is a slit-like valvular fold of skin, at right angles to the long axis of the head. The legs are light yellow, there are horny knobs on all the fetlock joints, the hoofs fluted and sharp and annulated at the base. The tail is black. The horns are smooth, diverge a little, and curve slightly forwards.

The measurements I have are the following :—

	♂. April 16th, 1896.	♀. July 31st, 1896.
Nose to tail	43 inches.	40 inches.
Height at shoulder	21½ "	21 "
Girth of body behind shoulder	19 "	20½ inches; barrel 26½ "
Point of shoulder to nose	14½ "	(not taken).
Girth of neck (middle)	7 "	7 inches.
" " arm	5 "	6 inches; thigh 13½ "
Length of ear	5 "	5 "
" " tail	4½ "	(black hairy tuft 2 in.) 4½ "
Weight	35 lbs.	33 lbs.

There is a curious pouch-like invagination of the skin between the base of the hoofs, open anteriorly, and big enough to contain a .577 bullet. The meat is excellent.

On June 27th, 1895, one of my boys caught a recently born kid, which uttered a slight treble cry.

A doe shot on October 13th, 1895, contained a two-months' fœtus.

They were generally seen in pairs on open plains.

10. Common Duiker. *Cephalophus grimmii* (L.). (*B. A. I.* p. 203.)

(*Cephalophus grimmii* ab. *ocularis*.)

The following details and descriptions are taken from my note-books :—

Found in wooded parts of Nyassaland, and does not affect open spaces, usually not more than two together.

General colour yellowish brown above, fading to white on chest and belly; the white only extends one-third down the forelegs, and half-way down the hindlegs, on their inner aspects. Forehead convex, rich chestnut-brown with black line down the centre of the face, and long tuft of hair between the horns, which are almost parallel and similar to those of the S. African form of *C. grimmii*. Tail one-third black above and two-thirds white below. Feet brownish black. The best measurements I obtained were :—

	♂. December 7th, 1895.	
Nose to tail	36½ inches.	Girth behind shoulders 18½ inches.
Height at shoulder	20½ "	" of barrel 19½ "
Length of tail	6½ "	" before hips 16½ "
Girth of arm	6½ "	" of thigh 11½ "

11. The Pallah. *Aepyceros melampus* Licht. (*B. A. III.* p. 17.)

It is on the low-lying riverine districts of Nyassaland that I have met with this lovely antelope, from Chiromo on the Lower Shire River, to the Maiuni Peninsula

on the southern shores of Lake Nyassa. It is never seen on the higher plateaux such as the Tuchila Plain (3900 feet).

Where there are open spaces, or "dambos" as they are termed, intermingled with open woodland and small thorny undergrowth along the banks of the Shiré River, with no villages in the neighbourhood, there may you look and make certain of finding Pallah. I found adult *males* to be as rare as the *females* were common. Though they are very watchful they are also most inquisitive, and, if they are not fired at, will retreat in front of you, gradually increasing their distance, and constantly stop to have another look at you. Twice I have known them to huddle up together in a crowd when shot at unawares, and run hither and thither, without any fixed plan of escape. In their company I have seen zebras, waterbuck, and Lichtenstein's hartebeest. They are very tenacious of life, and one animal ran 35 yards (out of my sight), though I had raked it from breast to stern with a 500 bullet which passed through the centre of its heart.

One doe which I shot on February 6th, 1896, was in milk, but I saw no young one in her neighbourhood. Frequently I stood and watched hundreds of does together in one troop, without being able to find a buck to fire at.

The flesh of this antelope is, to my mind, the most delicious that can be obtained for the table.

The best measurements I got of a *male* were as follows:—

Nose to tail	58 $\frac{3}{4}$ inches.
Height at shoulder	33 $\frac{1}{2}$ "
Point of shoulder to nose	17 $\frac{1}{2}$ "
Girth of neck	— 15 inches behind head + 20 $\frac{3}{4}$ inches before shoulders.
„ behind shoulders	34 $\frac{1}{2}$ inches.
„ of barrel (? distended by flatus)	41 $\frac{1}{2}$ "
„ before hips	34 $\frac{3}{4}$ "
„ of arm	8 $\frac{3}{4}$ inches ; thigh 12 $\frac{3}{4}$ "

12. The Bushbuck. *Tragelaphus scriptus roualeyni* Gord. Cumm.

This shy animal is widely distributed throughout the whole of Nyassaland where I had the chance of shooting.

Nowhere is it so plentiful as on the Zomba Range; I shot one at 5000 feet elevation, and they are still plentiful there despite the ravages of leopards, etc. From this locality I saw no fewer than three pairs of horns over 15 inches in length, so that they may be termed a fine race.

It is on the edges of thick cover just after sunrise or before sunset that you occasionally meet with them, daintily threading their way along with every sense on the alert, and ready at the least alarm to plunge into the adjacent bush.

The *male* is of a bluish slate-colour, and has no stripes, but large white spots on flanks; the neck is almost devoid of hair. I find a doe described in my notebook:—Body a lovely bright yellow; this tint is accentuated on the buttocks and saddle. From the middle line of the back were four or five indistinct white lines that ran roughly parallel with each other across the barrel and at right angles to the spine. There were a few large white spots, especially marked over the buttocks. Hoofs were distinctly lengthened.

A doe shot on October 11th, 1895, contained a three-months' fetus, and another shot on June 11th, 1895, had its udder full of milk and weighed just 60 lbs.

A female I shot on Mount Zomba on October 31st, 1895, gave the following measurements to my steel tape (No. II.), whilst one shot on banks of Shiré River (No. I.) was a little larger :—

No. I. ♀ ADULT.		No. II. ♀ ADULT.	
Nose to tail	54 inches.	Nose to tail	52 $\frac{3}{4}$ inches.
Height at shoulder	26 "	Height at shoulder	24 $\frac{3}{4}$ "
Point of shoulder to nose	19 $\frac{3}{4}$ "	Point of shoulder to nose	14 $\frac{3}{4}$ "
Length of tail	10 "	Length of tail	10 $\frac{1}{4}$ "
Girth of neck (middle)	12 $\frac{1}{2}$ "	Girth of neck (before shoulders) — 9 $\frac{3}{4}$ + 14 "	
„ behind shoulder	28 $\frac{3}{4}$ "	„ behind shoulder	26 $\frac{1}{2}$ "
„ of barrel	33 $\frac{1}{4}$ "	„ of barrel	35 "
„ before hips	(not taken)	„ before hips	32 $\frac{1}{2}$ "
„ of arm 7 inches; thigh	11 inches.	„ of arm 8 $\frac{1}{4}$ inches; thigh	16 "

The meat is very good, and Sir Harry Johnston, K.C.B., has described it as comparable to the finest South Down mutton, both in taste and quality.

13. The Inyala. *Tragelaphus angasi*.

Captain Olliver, of H.M.S. *Herald*, shot three of these antelopes near M'Kandi, about six miles west of Chiromo, which is situated at the junction of the Lower Shiré River with the River Ruo, that drains the Melanji Range. The late Dr. Mackay, R.N. (who was killed by a lion which he had wounded on the west shores of Lake Nyassa), also shot one, but no one knew where he had killed it.

14. The Sitatunga. *Tragelaphus selousi* Rothsch.*

The existence of this animal I was able to verify by a pair of horns which were purchased from a native at Chikwawa; this man said that the antelope was to be found in some swamps that lie between the Murchison Cataracts and the Zambezi above Tete.

Mr. Poulett Weatherley wrote me that from information he had received he hoped to meet with it near Lake Bangweolo, as the natives particularly described the "long foot" of this animal.

15. The Koodoo. *Strepsiceros strepsiceros* (Pall.).

This fine antelope was more sought after by sportsmen than any other, but few were shot whilst I was resident in Nyassaland. I have never found them away from hilly ground, as they take to the higher ground by choice if disturbed and are perfect mountaineers. They are very tenacious of life; and I spent two days hard climbing on the blood spoor of a wounded bull, which eventually eluded me completely. So acute are their senses, that what I have often experienced is, to obtain in a woodland opening a view of a grand head bearing spiral horns, with steadfast gaze fixed upon you; and before you have time to align the sights of your rifle, he wheels round and breaks into a gallop that will carry him miles away before he stops. The cows are more trustful, and seem to be aware that they are not wanted by the sportsman!

I found the stripes on a Koodoo's hide vary greatly, both in number and

* The specimens referred to by Dr. Rendall would no doubt have been the form described above (p. 206) as *Tragelaphus selousi*.—WALTER ROTHSCHILD.

arrangement. No two skins which I examined were alike, and the stripes often subdivide half-way across the back. A doe which I shot near Madzedzi on January 10th, 1896, had eight stripes on one side and nine on the other, whilst an almost viable foetus she carried had six stripes on one side and eleven on its left flank. Curiously enough the three Koodoo that I shot were all in the neighbourhood of Lesumbwi, where Mr. R. Crawshay spoke of them as "incredibly shy" ten years ago. A detachment of Sikh troops that I was in medical charge of purchased a young Koodoo from the natives in the Shiré River valley, and kept it alive on milk for some days. They thought it was some curious variety of their sacred animal, and asked me if it was a "blue cow," as they call the Nilghai (*Boselaphus tragocamelus*). This calf had its coat much longer, with the white stripes more distinct, than the adult beast.

The best measurements I obtained of a Koodoo bull were :—

Nose to tail	91½ inches.	Girth behind shoulder	70 inches.
Height at shoulder	55 "	" of barrel	72 "
Point of shoulder to nose	32 "	" before hips	54 "
Length of tail	17½ "	" of arm 14¾ inches : thigh	19½ "
Girth of neck (min.)	30 "	" " neck (max.)	43 "

Every one seems agreed about the excellence of the beef obtained from this splendid beast : this opinion I endorse.

16. The Eland. *Oreas livingstoni* Sel.

It is the striped form of this grand beast that occurs in Nyassaland, and it is usually met with in parties of from six to a dozen. Though they are sometimes met with near the Shiré River, they are present in greater abundance on the Tschila Plateau, and there are partial to the leaves and fruit of the Masuku tree.

My friend Mr. H. C. McDonald killed a fine cow Eland that had escaped from a lion not many hours before. Its neck and shoulders were scored with large deep gashes and punctures, from which the blood was still oozing. It was alone, and had been lying down, probably to recuperate after its struggle and flight.

They do not appear to consort with any other species of antelope. When following up their spoor I have noticed that they pull down and break branches from small trees and lofty bushes, to obtain the tender terminal shoots, which would otherwise be beyond their reach. The flesh of this animal is good and makes a colonrable imitation of beef.

17. Sable Antelope. *Hippotragus niger* (Harris).

On the Tschila Plain between the Zomba and Melanji Ranges right up to the shores of Lake Shirwa was the only place where I met with this antelope.

Here, however, it was quite an off-chance if you saw them, for they frequented the Masuku forests and the "dambos" that adjoined, and in November and December, the only time I visited them, the large dry leaves thickly carpeted the ground, and the noise caused by walking through them was similar to that one makes wading ankle-deep through the "cat-ice" of flooded meadows!

One of my companions, Mr. D. McAlpine, of Zomba, shot one curious aberrant specimen of this animal, *i.e.* a *female* that was as black as an adult *male* : it was

fully adult and its udder was full of milk, though no calves were seen; there were about eleven other *females* with her.

I noticed that in all adult *females* the annulations are practically absent on horns for the four inches of their lower or basal extremity, whilst on the distal side they again become well marked.

The flesh is very good eating—especially the half-grown beast.

18. Roan Antelope. *Hippotragus equinus* (Geoff.).

This antelope shared with the Puku and Zebras an immunity from the “rinderpest” which swept the game off the Nyassa-Tanganyika Plateau, since some friends of mine shot several fine specimens. This disease appears to have travelled some distance down the western shore of Lake Nyassa, and then taken a south-westerly trend, to enter Mashonaland by crossing some of the western tributaries of the Zambezi; it never entered the Shiré River valley.

Some friends told me they had seen them on the east bank of the Upper Shiré River, but when I came to cross-question them, they could not describe the face-marking, so that they might have been *females* of the foregoing species. They were said to be good to eat.

19. Lichtenstein's Hartebeest. *Alcelaphus lichtensteini* (Peters.).

This bubaline antelope has a wide distribution in Nyassaland proper, but is not found on the banks of the Zambezi River below its junction with the Lower Shiré River. It is usually met with in parties of from four to a dozen and a half individuals. They are very wary, and always found feeding on the open “dambo”; they pass through belts of woodland at a trot, and are very prone to post a sentinel on an ant-heap when there happens to be such a beacon in the neighbourhood. Disturbed, they retreat in Indian file, with a recognised pilot, often an old *female*, and if you knocked this leader over you could get several chances at a troop, if your object was merely indiscriminate slaughter.

Although they are so shy, they are at the same time very inquisitive, and will often pause in their awkward lumbering canter, and turn their heads round to have a look at you when out of shot, before they finally disappear. If they are in the vicinity of other game they will always take an independent line of retreat. They affect particular spots and will return to the same spot to feed, so that if you have shot over the ground you may sometimes know where to find them. I have shot both sexes with dried mud on the horns and forehead, so that they probably have the same wallowing habits that I noted in the Blue Wildebeest (*P. Z. S.* 1895, p. 360).

The two finest adults I shot gave respectively the following measurements:—

♂. Nose to tail	91½ inches.	♀. Nose to tail	87¾ inches.
Height at shoulder	52½ ”	Height at shoulder	50½ ”
Length of tail	26½ ”	Length of tail	26 ”
“ „ ear	9½ ”	“ „ ear	9½ ”
Point of shoulder to nose	30 ”	Point of shoulder to nose	30 ”
Girth of neck (min.)	30 ”	Girth of neck (min.)	22 ”
“ „ „ (max.)	43 ”	“ „ „ (max.)	35 ”
“ behind shoulders	56 ”	“ behind shoulders	53 ”
“ of barrel	70 ”	“ of barrel	65½ ”
“ „ arm 15 inches; thigh	17 ”	“ „ arm 13½ inches; thigh	16 ”

General colour rich glossy sienna-brown, fading to yellow on flanks, and white on under parts, with a yellowish blaze on each side of rump. Beneath the eyes and ears skin whitish in coloration. The forehead is prominent and dark brown, often tinged with black in the mesial line between and below the bases of the horns. From the inner angle of each orbit there extends horizontally inwards a well-defined narrow pale yellow mark, which **almost** meets across the dark chestnut-brown nose. It has a prominent black hairless tear-gland on the face below the orbital cavity.

It has black lips; the lower one is furnished with long black hairs. The frontal sinuses are so extensive that you can cut off the horns without opening the brain-cavity; the cranial cavities in communication with the air-passages are often infested with dipterous larvae. Between the hoofs of the forefeet and above them is an opening that leads into a *cul de sac*, which is filled with stiff black hair.

I have seen horns up to $20\frac{3}{4}$ inches in length.

The calf of this species is at first dun-brown, with a black line down the centre of the back, and has not a trace of the yellowish blaze on the rump; it is very swift of foot when still very young, as I was witness to this fact on September 22nd, 1895. On August 11th I shot an adult cow that carried a nearly full-grown foetus. Wounded animals I have heard emit a hoarse grunting bellow, but I have never been charged by a wounded animal, nor have I heard of an animal of this species attempting to retaliate.

20. Blue Wildebeest. *Connochoetes taurinus jacksoni* Sel.

These are found in small numbers on some of the slopes which border the Melanji Range. The *male* of a pair was shot by Mr. H. C. McDonald, of Chiromo. They were the only animals of this species he saw, and this one was only obtained after infinite trouble. The entire skin and skull he presented to the British Museum. No other sportsman has shot this antelope in Nyassaland.
